N.I.B. BULLETINS
No. 5.

BASKET-MAKING
BY
THE BLIND

Price 6d.

Published by the
NATIONAL INSTITUTE FOR THE BLIND
(*Registered under the Blind Persons Act, 1920*)
224-6-8, Great Portland Street, London, W.1

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INTRODUCTION.

THE National Institute for the Blind has recently undertaken an enquiry in conjunction with the National Institute of Industrial Psychology into the whole question of employing the blind on the industrial plane, and the present Bulletin, and others which are to follow, is being issued with the object of setting out clearly what trades can be practised by blind workmen and what improvements in management and technique seem likely to increase the efficiency of the workshops concerned. The Association of Workshops for the Blind has been closely associated with the enquiry, and with the issue of the Bulletins on Trades.

The present publication deals with Basket-making alone, but further Bulletins on Weaving and Knitting will follow. It is written in simple and direct language, without undue technicalities, and with two clear objects:—

(A) To interest the general public in the work the blind can do, the type and class of goods they can make, and the part they can take in the industrial organisation of the nation.

(B) To assist, if possible, those who are actually in charge of the workshops employing the blind, and who are dealing with the difficulties at first hand.

For the blind, employment is a vital need. For them idleness means deterioration of mind and body, and black unhappiness. It is by employment alone that the blind can take their part in the social and economic life of the community, and share in the privileges of citizenship by virtue of the contribution made by themselves.

In Great Britain no blind person is disregarded. A comprehensive system of agencies covers the whole country. They keep a register of every individual who is blind. They educate the child. They re-educate those whose sight has failed in adult life. They give technical training to the employable, and material and spiritual relief to those who, by reason of other handicaps or defects, cannot earn a living. Even for the unemployable they provide "pastime work" and so give happiness and self-respect.

The provision of work for the employable blind, however, stands on a different basis. There are many blind persons whose abilities have won them a secure footing in the professions, the arts, and commercial life. There are others who hold their own in industry, working at the same bench or in the same shop with workers who enjoy full sight. Placement work aims at establishing blind persons in any and every occupation to which blindness, mitigated or remedied by specialised education and specialised equipment, is not a bar.

Workshops for the Blind are industrial undertakings, employing blind workmen in processes which they are capable of performing, and turning out goods which can be sold in the open market. Such workshops are sometimes referred to as "sheltered workshops," inasmuch as they do not compel the management to compare the ability of the blind employees with that of the sighted.

In these workshops, blindness is treated not as a disability but as a handicap, which can be compensated by the payment of augmentation, *i.e.*, a supplement to the economic earnings ; also by providing specialised equipment and by developing specialised organisation for the disposal of the goods produced. Such workshops as a rule employ a bare minimum of employees with sight, to supervise, check or finish the products. The data at present existing are not sufficient to allow a final judgment to be made as to what proportion of sighted labour can be employed with beneficial effect on the earnings of blind employees. An enquiry into this question is now being made, and should prove of definite value.

Trades practised in Workshops for the Blind are for the most part long established, often traditional, hand-crafts. Their products are exposed to ever fiercer competition with machine-made goods turned out by mass production, or hand-made goods imported from countries where labour is cheap.

It is, however, possible that the blind may be found capable of turning out finished machine-made products and so competing in this market also. In Germany, in particular, the blind have proved themselves capable of operating automatic machines. But, provided always that they are well made, there is no need to despair of the future of hand-made goods. It must be realised, however, that though it is legitimate to sell goods made by the blind as such and to ask the public to give preference, other things being reasonably equal, to the purchase of sound and workmanlike articles made by their blind fellow citizens, yet, in selling them, sentiment can play only a very small part. The goods must sell themselves by their intrinsic merit.

For reasons which are suggested above, management and technique in the case of Workshops for the Blind cover the whole field from the purchase of raw material to the disposal of the finished goods. Every factor which sheds light on the special nature of the problem may help persons not at present engaged in the work, and particularly industrialists who are interested in industrial problems as such, to make further contributions to the employment of the blind. The problem is treated throughout as an industrial problem, that is to say, on the assumption that improved workmanship, increased output, and consequent reduction of the unit costs of production, are necessary to progress.

Increased production involves improved arrangements for selling. The problem of marketing requires still further investigation. The main factors involved are touched upon in this Bulletin, but the Advisory Committee on the Welfare of the Blind (Ministry of Health) is at the present moment engaged in a closer enquiry, and it is hoped that a further publication on this subject will be shortly available.

The general plan of these Bulletins is to take trades severally, and to describe first the articles turned out, secondly, the actual processes on which blind labour is engaged and the conditions under which it works, and thirdly, the markets which it is hoped to supply.

The National Institute for the Blind, the National Institute of Industrial Psychology, and the Association of Workshops for the Blind desire to put on record their sincere thanks for the facilities given to the investigators employed, and for the open-minded way in which managers of the workshops concerned discussed the methods in use.

BASKET-MAKING

PART I.

GENERAL SURVEY.

1. Suitability of the Trade for Blind Workers.

Basket-making has been practised throughout all the ages in almost all countries. It does not offer itself to the methods of mass production, and, being essentially a handicraft, it remains very much as it was before the introduction of machinery.

Basket-making has been taught to blind workers for generations, and, whether it be regarded as being as suitable as some of the other trades practised in Workshops for the Blind or not, it is a fact that it offers, at the present time, an opportunity of making a fair living to a larger number of blind men than any other trade. The capital expenditure required is moderate, the amount of sighted labour needed for supervision and finishing is low as compared with other trades, and the marketing of a large output, although difficult, has hitherto not proved impossible.

The period required to train a blind man to become a proficient basket-maker* in all branches is four to five years. Any physically able man should be able to master the trade in this time, provided he is not too old when he begins. The training demands the suppleness and adaptability of youth. A man whose muscles are set has great difficulty in learning, and it is often useless to attempt to train a man of over forty years of age.

The nature of the craft, with its large number of types of basket—each requiring a different technique—necessitates a thorough and complete training for a man who is blind. The exigencies of the trade necessitate frequent changes in the type of work undertaken, and a proficient craftsman must be prepared to make whatever comes along ; one who can only do certain work must expect to earn only indifferent wages.

Heavier kinds of baskets require a good deal of physical strength, but for light and fancy baskets some institutions successfully employ women workers, who can be trained in about three years.

Vision of any degree is obviously of great advantage to a craftsman in any trade, but in basket-making many totally blind men attain an extraordinary degree of proficiency. A recent survey of the earnings of blind basket-makers in a number of institutions seems to indicate that totally blind workers earn almost as good wages as those possessing a measure of sight. The data, however, are inadequate for any definite conclusion on the comparative earning capacity of totally blind and partially blind basket-makers. The amount of supervision and a variety of local conditions affect the comparison materially.

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* Throughout this Bulletin the expression " basket-maker " is used to describe one who can be employed upon most of the baskets normally turned out by a shop doing a general business.

The latest return of occupations practised by the blind shows that of the total 9,548 blind persons employed in England and Wales, 1,958 are basket and cane workers. Basket-making employs more persons than any other trade practised in Workshops for the Blind.

In the Appendix will be found details of the personnel in each of the eleven workshops visited by the National Institute of Industrial Psychology's investigator. It will be observed that in some workshops the totally blind outnumber the partially blind, and that the size of the sighted staff does not show a tendency to relate itself to the proportion of totally blind workers.

2. Kinds of Baskets.

The immense variety of baskets in household and trade use may be best classified by the material of which they are made. They fall into four main groups, which can be roughly characterised as within or beyond the capacity of blind craftsmen. They are :—

(A) Baskets made of **Willow :** (Section 4 gives an account of the materials used) *e.g.*, hampers, warehouse, tradesmen's, waste-paper, office, luncheon and tea, and household baskets. Most baskets falling into this class are suitable for skilled blind workmen.

(B) Baskets made of **Unpeeled Willow :** *e.g.*, wine hampers, and smaller cheap baskets used for the delivery of perishable articles. Such baskets are suitable for blind workmen, but they require less skill and command inferior wages.

(C) Baskets made of **Cane :** *e.g.*, coal, rubbish, brick, builders', dust and ice baskets. These baskets are suitable for blind basket-makers, but also require less skill than willow baskets, although they afford opportunities of earning very good wages.

(D) Baskets made of **Fine Cane:** *e.g.*, fancy baskets, linen and needlework baskets, and cane-bordered trays. Although many of these baskets are made by blind craftsmen, they are for exceptional workers only, the intricate nature of the work being beyond the average blind craftsman.

There are, in addition, other kinds of baskets (described in Section 12) which are either unsuitable for blind craftsmen, or which cannot be regarded as a commercial proposition for Blind Workshops.

3. Lay-out of Workshops.

The size of some baskets, and the length of the material used, necessitates the provision of a good deal of space for an efficient Basket Shop. In many Institutions for the Blind, where lack of funds prevents the acquisition of more commodious premises, basket-making has to be practised in all sorts of small rooms or sheds. Nevertheless, the ideal to be aimed at is a shop entirely on one floor, with ample storage and soaking accommodation, a separate but accessible finishing shop, and the foreman's office—glass partitioned off—in such a position as to enable him to over-see the whole department. The store in which the raw material is kept should be readily accessible to the street, through double doors, up to which vans can be drawn close. It is imperative that such stores be dry and well ventilated, since willows in bundles quickly deteriorate in damp or ill-ventilated storage, and desirable that they be well lighted and sufficiently large to enable advantage to be taken of opportunities of bulk purchase.

The store in which finished baskets are to be kept should likewise be accessible to the street in order to facilitate loading. The workers in the workshop itself are generally most conveniently accommodated in a double row, with a wide aisle up the middle in order to minimise the inconvenience caused by the handling of long lengths of material. Each worker is allotted a pitch, where he works with his material, sorted into appropriate sizes, beside him. To avoid a man's material becoming mixed up with that of his neighbour, the pitches are usually separated by partitions. The size of this pitch obviously varies with the number of workers who have to be accommodated, and with the class of work performed.

The making of large hampers demands more space than small fancy ware, but the shop-planner must take into account the fact that the work given out to a man varies from day to day. A small difference in the size of the pitch in a workshop employing a number of men may make a large difference to the cost of the building. All that can be said, therefore, is that the pitch should be large enough for working on the largest type of basket produced, or likely to be produced, by the workshop in question. A reasonable space for a man employed on general work is fixed by expert opinion at about 8 ft. by 7 ft.*

4. Materials.

Willows, for the manufacture of baskets, are in this country grown mainly in Somerset. British willows, though of good quality, are not so fine as some Continental varieties, and in any case the quantity grown in this country is insufficient to meet the demand. Imported willows, being mainly from countries which manufacture baskets themselves and take the pick of the home produce, are generally below the finest quality. An exception is South America, which grows a good quality of willow, mainly for export. Willows used in basket-making are known as Rods, those of one year's growth being used if possible, though two or three year rods are sometimes used for staking and bottoms. When cut from the bed the rods are called " Green " ; when they have been dried they are called " Brown," and when peeled " White." If they are boiled before they are peeled the tannin from the bark dyes the rods, which are then known as " Buff."

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*The investigator of the National Institute of Industrial Psychology expressed a definite preference for a pitch 9 ft. square.

The rods are sorted into various sizes, each size having a name by which it is known to basket-makers, and are tied in either bundles or bolts. The price of rods naturally varies according to conditions prevailing. The prices of willows vary according to quality, season, and size, but at the present time (1933) the range of prices is—Brown from £5 to £14 per ton, White and Buff from £30 to £50 per ton.

Cane is entirely imported and is sold in bundles of various lengths and thicknesses, classified according to quality. Whole cane varies in price from about £24 to £50 per ton. Whole cane is used for baskets which will be subjected to exceptionally hard wear, such as those mentioned in Section 2 (c) of this chapter, and is also used for strengthening certain willow baskets. Cane used for seating chairs is the skin of whole cane peeled off into skeins.

Pulp Cane, which is used for some of the finer baskets mentioned in Section 2 (D), is the central portion of the whole cane, drawn out into rods of various sizes.

Split Cane, which is used for the sides of such baskets as soiled linen baskets, and for the lapping of handles and similar work, is whole cane split and shaved.

In the purchase of material a good deal of money can be saved by bulk purchase at the right season. In addition, care taken to purchase from the right markets may also result in considerable saving, greater than is always realised. Managers who are in a position to avail themselves of opportunities of acquiring materials, either direct from the producers, or, in the case of imported material, from the ship, are in a better position than those who are compelled to buy hand to mouth from factors. It is, however, generally found that there is little advantage in purchasing large quantities without regard to actual requirements, and that careful purchasing against known commitments will generally, by the elimination of the waste which so easily creeps in, save money, even if such methods do not enable the very lowest quotations to be obtained.

All materials require soaking before use, the length of soaking varying according to the kind and quality. Material should be used as soon as possible after being removed from the tanks and allowed to drain ; if it is allowed to dry it will require re-soaking. Most basket-makers cover their rods with a damp cloth to prevent evaporation of moisture before they can be used.

5. Plant and Tools.

The most important and the only really costly item of plant is the tanks for the soaking of the material. The most general type is galvanised iron, fitted with inside flanges for holding wooden sinkers. It is obvious that these tanks should be placed as conveniently as possible, so as to reduce the time occupied by the workmen in fetching material from soak. To save the workers' time it is also desirable that ample soaking accommodation be available, and, for their general comfort and efficiency, that the tanks should be placed under cover, beyond the reach of frost and approachable by a covered path.

Basket-makers' tools are few in number, and can be obtained at a cost of a few shillings per worker. Each worker is provided with a plank—about 5 ft. 6 ins. by 2 ft. 6 ins., on which he sits, raised a few inches from the floor to keep him out of the wet caused by the soaked rods—together with a lap board on which to place small baskets as the work of construction proceeds.

Each worker should have an open wooden box, to contain knives, small shears and hand iron, together with a rack containing different sized holes in which to keep bodkins. Loose frames are also sometimes used to assist the blind basket-maker, consisting of two or more pieces of flat steel, crossed at the centre and adjustable to any angle.

6. Processes of Manufacture.

Most of the baskets referred to in Section 2 of this Chapter as those which can be made by the blind fall, in workshop terminology, into three categories, viz., Randed, Slewed and Fitched.

(A) **Randed Baskets.**—There are three qualities usual in the trade ; " best," " medium " and " common," the difference lying in the closeness of the weaving or " randing " of the bottom and sides—which affects the weight of the basket.

The tools required for making randed baskets are hand and " picking " knives, large shears (for cutting the large sticks used in bottoms and covers), small shears (for general cutting use), bodkins (for making holes and for securing the basket through the bottom so as to leave the hands free), commander (for straightening heavy rods), and beating iron (for hammering down the rods forming the sides of the basket to the requisite closeness), together with a screw block with two thumb screws for holding firmly uprights used in lids or bottoms.

A worker commences a square randed basket, such as a hamper, by cutting the bottom sticks, usually about 2 ins. longer than required for the finished bottom. These he places in a screw block to hold them firmly in a perpendicular position, at an equal distance apart, having first doubled each of the outside sticks with smaller ones. He then fills in, using the coarsest material. When the required length is reached, the protruding ends of sticks are cut off. The bottom now being complete, he proceeds with the staking, which consists of driving stout rods into the four edges of the bottom. The rods are then bent upwards close to the edges of the bottom, the stakes being held in an upright position by a loose frame to enable the worker to keep the basket the correct shape. He then proceeds with the " upset " ; this usually consists of cane or cane and willow, thereby connecting the sides to the bottom in a firm and neat manner. He then fills in the sides, called the " randing," with rods, weaving each rod separately in and out of each of the stakes. This continues until the required height is reached. Handles are then added, one to each end. A wale of strong material is now used to form a level surface for the border. The remaining parts of the upright rods are plaited to form the border, after which the ends of the rods are cut off. If the basket being made is a hamper, a lid will be added. This is made similar to the bottom but of a better finish, the ends being finished with cane bands. The lids are made with two holes in front to allow for straps or iron fastenings, and two holes in a similar manner at the back of the lid for fixing the lid to the body. The lids can be attached with iron or hide hinges. Ends of lids and corners of baskets can be laced with hide to strengthen. Round or oval baskets are made on the same principles.

(B) **Slewed Baskets.**—The term " Slew " means working two or more rods together, the general principle of manufacture being the same as with randed baskets. Baskets made in this style are lighter and cheaper, but will not stand as much strain as randed baskets.

(C) **Fitched Baskets.**—Fitched baskets are those made with open sides, usually for waste paper and light warehouse use, or for poultry crates. The bottoms are similar to the randed baskets, the stakes being carried upright. The upset is added as in randed baskets. The sides are strengthened with a " fitch," one or more according to the quality and height of basket required, the fitch consisting of two rods woven together in and out of the uprights. These baskets can be further strengthened by inserting bye stakes. These are placed into the upset between each or every other stake as required, the wale being placed on the top fitch, and the basket being bordered as usual. Handles can be added if required.

Reference to the illustrations will make clear the different types of baskets and the component parts referred to above.

7. Use of Material.

Material is purchased in different sizes, but requires to be sorted before use, in order that the exact kinds of rods required for the different parts of baskets and for the different processes may be readily available. In some Workshops for the Blind the workers sort their own material, in others the services of sighted or blind rod sorters are employed.

There is a similar variation in the method of issuing material, soaking it, and cutting it. Whatever method be employed it is clear that efficiency of production will largely depend upon businesslike handling of the material, in order to avoid waste of time caused by unmethodical issuing, and of valuable willow or cane by bad cutting. Losses of material and of time in the handling of material before actual manufacture is begun is one of the most persistent causes of loss in Workshops for the Blind, and organisation of this part of production requires the best brains at the management's disposal.

8. Supervision.

The last section has touched on the important and difficult question of sighted help, and it has previously been pointed out in Section 1 that the details given in the Appendix do not show any definite correlation between the ratio of totally blind to partially blind workers and the ratio of sighted staff to blind workers.

A further enquiry is being made into this question. At present it can only be said that the practice of workshops varies widely. In some, the blind workers, having received their material, are left to make the baskets themselves without supervision, or with such intermittent attention as can be afforded by the foreman of the department. In others, sighted men are placed in charge of groups of workers, to whose work they give their whole attention, correcting faults as they occur. Some workshops achieve satisfactory results by encouraging self-reliance in their workers and providing the minimum of direct supervision. Others find it preferable to adopt the second method. Much depends upon the class of work in which the shop specialises ; the type of man employed, and his degree of physical disability, apart from blindness, will also affect the question.

9. Finishing.

The methods of Workshops for the Blind with regard to the finishing of baskets also vary, some allowing the blind workers themselves to do the more simple operations of finishing, such as picking, *i.e.*, cutting off the projecting ends of rod. Others employ sighted labour for this purpose. There are, however, a number of finishing processes which are, as a rule, carried out by blind or sighted finishers, after the basket has left the hands of the basket-maker. Such processes include the fitting of locks or hinges, the fixing of wheels, and the lettering and varnishing of baskets. Some fancy baskets also require spraying with cellulose paint. These baskets, of which brightly coloured waste-paper and linen baskets are examples, are, however, usually sent outside the Institution to be sprayed, since the plant necessary for this purpose is costly and occupies a good deal of space, and it is generally found to be cheaper to get this work done outside.

10. Wages and Production.

Wages are added to by a payment to make good the actual handicap of blindness. This payment is known as *Augmentation,* but there is no uniform method throughout the Institutions or Workshops of making this augmentation.

Wages in the sighted basket-making trade are at piece-rates governed by the lists issued by the Union of Journeymen Basket-makers, and these lists are generally followed by Institutions for the Blind practising the trade.

The Association of Workshops for the Blind has expressed the opinion that there is no reason why all workshops should not employ the Official List, it being obviously desirable that for purposes of comparison a standard rate of wage shall be employed. It will, however, be noted that in the sighted trade the Trade Union rates are, in all cases, in respect of complete baskets ; that is to say, the man sorts his own material, makes his basket and finishes it, with the possible exception of metal work and paint. In Workshops for the Blind, however, as has been pointed out above, methods in these respects vary, and it is, therefore, inaccurate to suggest that the rates of wages paid are in all cases comparable, even though the official rates are followed. Thus a man whose rods are sorted for him, and whose baskets are picked by sighted finishers, is, in fact, being paid a higher rate of wage than another who sorts his own material, and even picks his own baskets. Similarly a man, being one of a small group of workers which has the undivided attention of a sighted supervisor who corrects faults as they occur, is *prima facie* in a favourable position as regards wages as compared with a man whose work is not directly supervised, even though the wages of both are calculated by the Official List.

To generalise on the productivity of blind workers is obviously difficult : the class of worker, the amount of supervision, the skill of the management, the local conditions, and many other factors all have their effect. Some particulars have, however, recently been collected concerning a group of workshops in different parts of the country, from which at least a rough suggestion can be offered.

An examination of the results of these workshops suggests that, subject to all reservations mentioned, the selling output of a skilled blind basket-maker, in full employment in a well managed workshop, should be between £120 and £200 per annum. From available statistics it appears that the average wages, exclusive of augmentation, of a skilled blind basket-maker, when fully employed—and making no allowance for sickness, etc.—will amount to between 30s. and 35s. per 48 hour week.

11. Marketing.

By far the most important problem confronting those responsible for the management of Workshops for the Blind is that of disposing of the products. This is already a serious problem, and will become considerably more serious when the large number of trainees whom the Local Authorities have persuaded the workshops to accept become journeymen.

Workshops for the Blind have, for generations, been occupied in the production of baskets, and consequently they enjoy a large share of the trade. They are, however, faced by severe competition—both home and foreign—and, in a lesser degree, by the substitution of metal or other material for receptacles which formerly were made of basket-ware. Examples of the latter are wire letter trays, wooden or metal waste-paper receptacles, and the metal bins which are sometimes used in place of rubbish baskets. There is, however, a large trade in baskets summarised in Section 2 of this Chapter.

It will facilitate a grasp of the problem to set out briefly some of the more important consumers of baskets in different parts of the country, to whom Workshops for the Blind and others must look for bulk orders:—

> **London:** Government Departments and the London County Council are buyers of cane and willow baskets, and most of the municipal bodies purchase quantities of cane dust baskets. Cane and willow baskets of all descriptions are purchased for the railways and for the docks, and quantities of cane baskets are used by builders, demolition companies, gas companies, etc. Other large consumers are laundries, travellers, and theatrical companies for hampers, and warehouses and large stores for baskets of a general nature.
>
> **West of England:** At the large docks there is a special demand for coal baskets.
>
> **South of England:** In the docks of Portsmouth, Southampton, Plymouth, etc.
>
> **Manchester:** In addition to warehouse baskets and hampers, there is, when times are brisk, a large demand for skips for the cotton mills, of which enormous quantities are consumed.
>
> **North-East Coast:** There is a local demand for baskets used in the fishing industry.
>
> **Yorkshire:** Large quantities of baskets are used in the wool trade.

Midlands : Leicester and Nottingham may be regarded as the centre of the basket-making industry, specialising in transport hampers and other work for the hosiery and lace trades.

These are some of the more important avenues of bulk disposal ; there is, of course, a very large general trade in baskets—almost every firm and individual being a purchaser, at one time or another, of baskets which can be made by the blind.

12. Foreign Competition.

As was mentioned at the beginning of this chapter, the basket-making trade is suffering from foreign competition, which is affecting the Institutions for the Blind and their sighted competitors alike. The duty of 20% imposed in March, 1932 (and recently increased to 30%) on imported baskets has eased the position in certain directions, but in order to facilitate a general understanding of the market, it may be of interest to refer to the subject in some detail. The following countries export baskets :—

Germany : Germany exports baskets on a large scale, specialising in fancy baskets of all descriptions. Such baskets are mainly produced in village industry, which flourishes in Germany. It is also true to say that English workers have, for the most part, not been trained to make the kind of baskets which are produced in Germany, and, therefore, the imposition of the duty is unlikely to affect matters to any great extent. There is a heavy demand in this country for German baskets on account of their fine nature. Examples are fancy waste-paper and linen baskets, music stands, newspaper racks, etc.

France : A village industry flourishes in this country also, and a large number of fine baskets are produced, chiefly by girl labour. An exceptionally high class of willow is grown in the country. There is a large demand in Great Britain for French baskets, examples of which are knife and plate baskets, chair-screens, wash-stand backs, and bassinets, and as the English worker is rarely trained to make these, the imposition of the duty is again unlikely to have much effect.

Belgium : Competition from Belgium is of a different order. The majority of Belgian baskets are of a stronger kind, such as warehouse baskets and laundry hampers, all of which can be produced in this country, but at a far higher cost than in Belgium. Prior to the imposition of the duty, it was possible, in some cases, to send such orders to Belgium, and obtain delivery in London within fourteen days at a cheaper price than the equivalent article could be manufactured anywhere in this country. While it is too early as yet to say anything definite, it is probable than the 30% should be sufficient to benefit this trade when the present stocks have been absorbed. Linen and other lighter baskets are also produced in large quantities in Belgium. As in the case of France, willows are grown largely in Belgium, the best being used for the home market and the surplus exported.

Holland : This country produces baskets, principally for the fruit trade, having entirely captured the English market for those articles, which are known as " sieves " and " half-sieves." The most suitable material for the purpose is grown in Holland, where conditions enable these baskets to be made cheaper than they can be produced in this country. Attempts are being made to take advantage of the rate of exchange and the import duties to capture the trade hitherto enjoyed by the Belgian and Dutch exporters. The outcome of these efforts is uncertain, the markets at present being dominated by the large forward contracts which have been placed by consumers, and by enormous stocks held both in Holland and here, which the producers will be compelled to sell at any price. Until these stocks are exhausted it will be impossible to forecast whether the advantages will be great enough to enable the British manufacturer permanently to supply the demand.

PART II.

AN INVESTIGATION BY THE NATIONAL INSTITUTE OF INDUSTRIAL PSYCHOLOGY.

1. Introduction.

The National Institute of Industrial Psychology, as a result of visits paid by its representatives to eleven Workshops for the Blind where the trade of basket-making is practised, put forward certain suggestions for the consideration of those responsible for the management of such workshops.

Some of the suggestions made are already in practice in well-organised workshops, others may be too expensive for adoption in times like the present, while others again may be regarded by some workshop managers as of theoretical rather than practical importance. But the findings of the investigators are summarised here in order that those responsible for the conduct of workshops may consider the suggestions put forward, in the light of their own experience, and with the knowledge that an informed and impartial observer may often, because he is not immersed in day-to-day details, bring new light to bear on difficult problems. The very fact that he does not always see the obstacles that lie between him and the ideal set forth may even be an advantage.

2. The Special Conditions of Workshops for the Blind.

There are certain differences between the Workshop for the Blind and that for the seeing, which have to be taken into account in any investigation, and these may be briefly noted :—

(1) The numbers employed in an Institution for the Blind at any particular trade rarely exceed thirty, and are often very much smaller, so that the problems associated with a factory employing large numbers of workers do not arise, and the benefits of mass production cannot be obtained.

(2) While the numbers are not large, there are considerable individual differences to be reckoned with, and side by side in one small workshop four distinct types may be found. There is the totally blind man, who has been blind from childhood, and who has received his education and training in an Institution for the Blind ; there is the totally blind man who lost his sight in adult life, and previously may have worked at a trade very remote from basket-making ; there is the partially blind man who was trained in a blind school ; and finally, the partially blind man whose defective vision is a comparatively recent happening. Add to this the fact that the term " partially blind " may cover a very wide field of defective vision, and some idea of the very different types that go to make up the personnel of a blind workshop is obtained.

(3) The fact that the choice of manual occupations open to a blind person is unfortunately very limited often means that a blind basket-maker may have taken up the trade, rather from lack of any other more attractive opening, than because he had any special leaning towards that particular trade ; the term " vocational training " as applied to the trades followed by the blind has a more optimistic sound than the facts would always bear out.

(4) While there is at the back of every seeing workman's mind, especially at the present time, the knowledge that unless he can show himself " better

than the next man" at his trade, he may be discharged, this fear is far less present in the mind of the average blind man, who knows that, unless he behaves really badly, the workshop is unlikely to discharge him. The fact that the care of the blind is an obligation laid upon the local authority tends to give the less energetic worker a sense of security which has its disadvantages.

(5) The fact of blindness makes the movements of the blind worker from place to place naturally much slower than those of the seeing. However industrious a blind man may be, he cannot accommodate himself to strange surroundings with the ease and speed of the seeing, nor can he, unless he is exceptional, move as freely even in surroundings that are familiar.

(6) The partially blind worker, like the seeing, is apt to have his attention distracted from work from time to time by any unusual happenings in the workshop, and by reason of his defective vision he is apt to waste more time when he looks about him than the seeing worker. He is not necessarily, therefore, quicker than the totally blind worker.

(7) The Workshop for the Blind has generally grown from rather modest beginnings, and where the buildings date possibly from times prior to the passing of the Blind Persons Act, when the employment of the blind was a matter left to private philanthropy, they are often inconvenient and difficult to adapt to modern requirements. The ordinary employer of labour is compelled to have the most modern equipment, and the latest improvements in building and plant, if he is to continue in business. Those responsible for blind workshops are tempted to postpone, and if possible wholly avoid, any capital expenditure, in the hope that the public will prefer hand-made goods, made by the blind, to foreign machine-made products.

3. Lay-out of Workshop.

The ideal workshop, on one floor, its walls whitewashed for the benefit of the worker with a little sight, its ample window space, its adequate ventilation, its " pitches " of generous size, has already been described on an earlier page of the Bulletin, and there is not very much to add here. Good lighting is specially desirable in the interests of the partially blind worker, and the fact that the immediate lighting about him is good is not enough, as he can adapt himself less easily than the normally sighted person to variations of intensity of light. He should have sufficient light to enable him to move about with ease, if accidents are to be avoided, and his greater comfort and efficiency as a worker secured. Improved methods of heating (by radiation) and better ventilation ensure that the hand temperature of the workers is improved, and tend to promote maximum production and efficiency.

That the tanks for soaking the material should be easily accessible from the workshop is, of course, desirable, and those responsible for the investigation on behalf of the Institute of Industrial Psychology also recommended that the water in the tanks should be warmed in winter, when the removal of material from half-frozen water may be very unpleasant, as well as being responsible for delaying the worker who has to wait for his benumbed fingers to thaw; the material, too, is rendered less pliable by the icy water. The expense involved, however, in heating the tanks may be a difficulty, and if the tanks can be kept under cover, and are approachable by a covered path, the danger of their becoming frozen over is considerably lessened. Time is sometimes lost by the worker having to grope for material in the tanks, and it is suggested that different parts of the tanks should be specially allocated for the various types of raw material in use.

4. Storage of Raw Material.

The storage of the raw material for basket-making is a matter of some importance, but it is one on which it is difficult to be dogmatic, and each workshop has to examine the problem for itself in order to devise methods of storage that will save time and labour. The investigators of the National Institute of Industrial Psychology emphasised the point that bundles of cane should, if possible, be so arranged that any bundle can be extracted without removing any other. Valuable time is saved thereby.

5. Sighted Labour.

The Workshop for the Blind is rightly averse from the employment of sighted labour for any processes that can be carried out by a blind man, but the question has been raised by the investigators whether it might not be more economic, and better in the interests of the blind themselves, to entrust to a sighted youth, or to one with a fair amount of useful vision, some of the rather unskilled work at present generally done in blind workshops by the blind themselves. It is suggested that this might include the cutting of the stakes, and the giving out of material, duly soaked and prepared, to the workers each morning, so that they could start work at once, without having to visit the stores themselves for their material; it would be requisitioned overnight, and laid ready for them on their pitches. The blind workman who has to visit the stores for his material generally takes longer to find his way there than a seeing worker would do, and one distributor of the materials would probably save a considerable amount of time. It must, of course, be remembered that if all the preparation of material is done by unskilled labour, the blind employee, set free to give all his time to skilled work, will produce a larger number of finished articles, with consequent effect on his piece rate and earnings. In any event, the fetching of materials by the workers is not conducive to efficiency.

6. Receptacles for Materials.

Orderliness in any workshop is desirable, but in a Workshop for the Blind it is essential, from the point of view of avoiding accidents alone, but particularly for greater efficiency. If the worker does not have his task made as straightforward as possible, valuable time is wasted, and for this reason the investigators paid special attention to the question of a receptacle for the raw material on which the worker is engaged, and also on that of a tool holder. The decisions reached by them after considerable experimentation in these directions are worth recording.

The blind worker generally sits on a box or plank, or on the floor, and has his material on the floor of his pitch, beside him, thereby using up a good deal of his working space, which is generally precious, and often burying under the material the tool that he has not in immediate use, but may want very shortly. It is suggested that a simple three-compartment rack might be installed on the left-hand side of the pitch, with a metal tray at its base to catch any moisture, and with side bars on hinges so that they may be opened to place the material in position. In order that the material in the rack may be always ready for working, the frame may be refilled twice a day, and, if necessary, occasionally sprayed as well. An experiment was made in the use of a frame on these lines, and the results were encouraging, and suggested that the use of a somewhat similar structure might be very useful, though it is possible that the fact that the material used was prepared for the worker before being put into the frame accounted for some of the increased production as well as the frame itself. But however this may be, it is certain that the frame, whether its detail is yet the best that can be devised or not, is a step in the right direction, and should make for greater efficiency than a floor littered with material, from which the blind man must select, by a hit-or-miss method, the cane he needs for his work. The placing of his material in such a rack keeps the floor of the workshop dry, and so promotes the health and comfort of the worker. Similarly, a tool-case, consisting of a fairly large tray with five compartments, each 3 inches wide, 12 inches long, and 2 inches high, placed on the right-hand side of the worker, is recommended. Into it he can throw his tool, and after a very little practice he knows where to obtain it when it is wanted.

That such devices should be popular with the workers at first is not to be expected, as we all have a kindly and tolerant eye for our own untidinesses, and an equally critical one for the " gadgets " of others, and the worker, whether blind or seeing, is generally conservative.

An adjustable seat, to be raised by the worker as the height of the basket he is making increases, is another suggestion put forward by the investigators, but something that shall be at once satisfactory, and not so expensive as to be prohibitive, has not yet been devised.

7. Team Work.

The blind worker is necessarily more isolated than the seeing, and must carry on his job with very little reference to what is going on about him, whether his fellow workers are blind or seeing. This isolation tends to drive the blind man in upon himself, and is perhaps accountable for that introspection and self-centredness sometimes associated with blindness. It is to counteract this isolation that an experiment in team-work was tried, four blind workers volunteering to take part in a co-operative effort, which extended over four and a half days. The result of the experiment (which took the form of making a number of plate-baskets, each basket being shared between four men) showed an apparent increase in production of 25.2%, allowance being made for the fact that the investigator prepared the material. The manufacture of the baskets was divided into five parts, the bottoms, staking and upsetting, siding, border and foot, and the partitions A made the bottoms, B did the staking and upsetting, C the siding, and D the border and foot. Each man worked at his own pitch.

Though a single experiment cannot be taken as proof, it opens up an interesting field for further adventures on the same lines, which, even if they do not show such a substantial increase in production as the 25.2% quoted above, would be valuable if they tended to break down the isolation of the blind workman, for it is this that perhaps lies at the back of some of the unrest that from time to time characterises most blind workshops. It must be remembered too, that although basket-making is rightly termed a skilled trade, it can be monotonous, and anything which gives added interest to the work is to be welcomed for its own sake.

8. Supervision.

The question of supervision is closely bound up with that of the employment of seeing persons in workshops for the blind, and is, therefore, one not easy of solution. In order that the blind worker may turn out first-grade goods, he needs more supervision than the seeing man, and those who carried out the investigation emphasised the desirability of a supervision that should be continuous. The blind man who does not submit his work to criticism till the finished article is produced, may show up something that has gone wrong at quite an early stage, and an error which might have been easily put right when it occurred has been allowed to vitiate the whole article made. But continuous supervision means the employment of seeing persons, and it is important that the ratio between blind and seeing workers shall be carefully watched. The balance is delicate, and needs continual scrutiny by the authorities responsible for the workshop.

9. Variation in Output due to Change of Work.

Experiments were made by the investigators in one workshop where workers were frequently changed from one type of basket to another in order to determine the effect of these changes on output. The results obtained indicated that no change should be made at intervals of less than a week if the full efficiency of the worker is to be utilised. Further experiments in this direction might usefully be made at some later date.

10. Other Suggestions.

Other points brought forward by the investigators include the statement that a five-day week, or a shorter working day, do not necessarily result in an appreciable fall in production, that augmentation should not be reduced as the workers' earnings rise, but should either increase with them or remain stationary, and that a break, morning and afternoon, speeds up and improves work.

11. Conclusion.

The findings of the investigators have not been revolutionary. They have found more in the conduct of blind workshops to praise than to condemn, or even to criticise, and they repeatedly lay stress on the happy relations that exist between the workers and the management.

Marketing, the main problem confronting those responsible for workshops, did not come within their terms of reference. It is satisfactory to know that, apart from this problem, and having due regard to all the special difficulties peculiar to a workshop for the blind, their criticisms were more concerned with points of detail than with broad principles.

APPENDIX. BASKET TRADE.

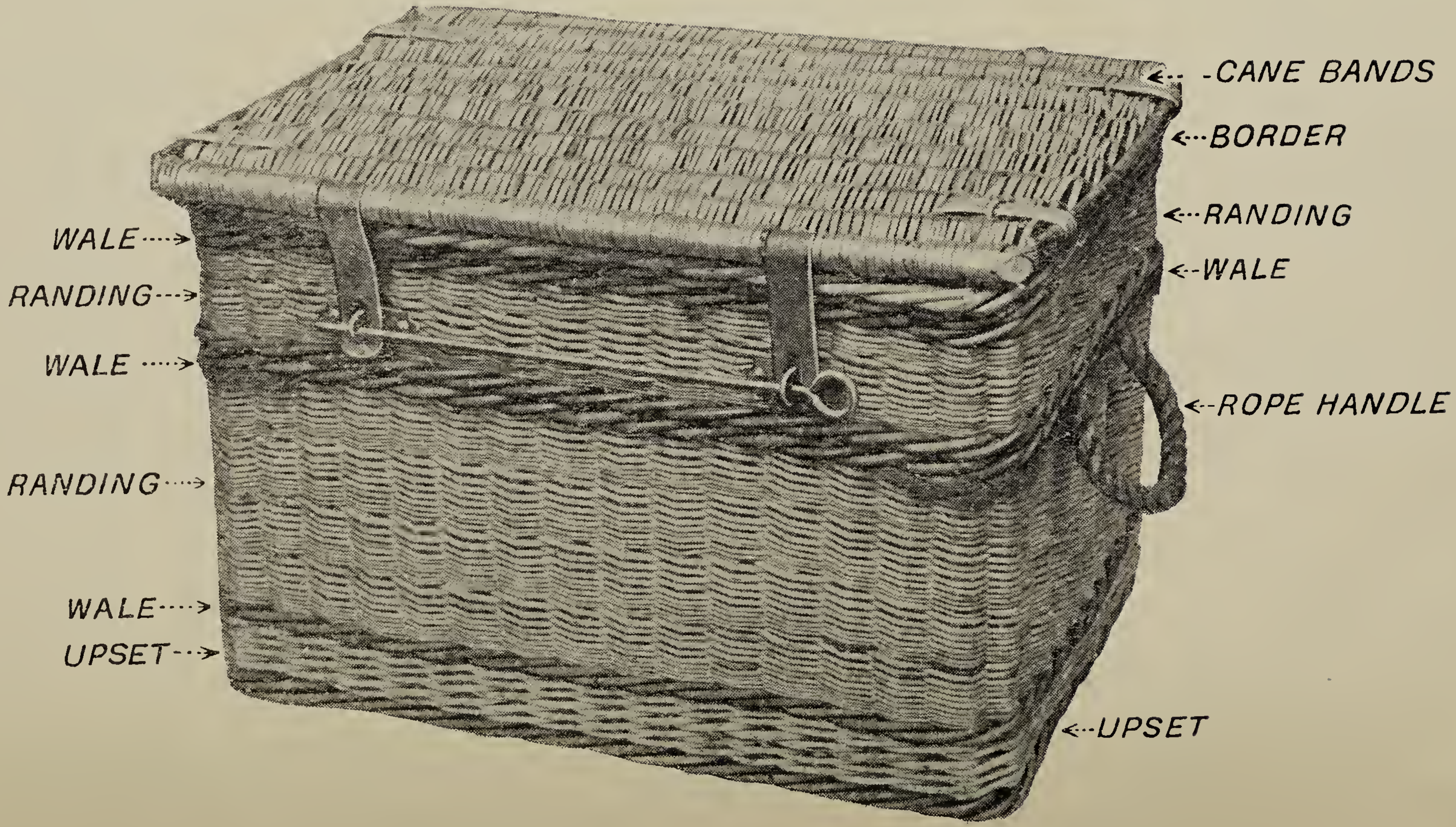
Institution.	No. of Workers and Average Wages.*		No. of Hours Worked.	Rate of Payment.	Augmentation.	No. of Sighted Staff.	Ratio of one Sighted Staff to Blind Workers.	Type of Work.	No. of Years Training.
	Partially Blind.	Totally Blind.							
1	25/2 (18)	24/6 (10)	42½ hrs.	London Union of Journeyman Basket Makers.	15/- per head	4	5.5	General shop work	4 yrs.
2	39/- (10)	38/- (19)	47 ,,		15/- ,, ,,	5	7.8	Do.	4 yrs. min
3	33/9 (26)	23/4 (16)	39 ,,	Govt. contracts special list	15/- ,, ,,	11	3.8	Do.	3 yrs.
4	28/5½ (40)	21/4 (21)	47 ,,		15/- ,, ,,	3	15.7	Do.	3 yrs. min.
6	32/-	(27)	45 ,,	Lancs & Cheshire Skip & Basket Makers' Assoc.	16/6 p.w. for sq. intricate work 10/- p.w. for rough work of ballast hampers	3	9	Skips, square hampers and fenders	4 yrs.
7	23/2 (12)	25/10 (12)	48 ,,	Brit. Amal. Union of Basket Makers	Varying from 9/2 — 22/6	2	12		5 yrs.
8	30/4 (7)	28/9 (6)	48 ,,	Do. do.	5/- — 15/-	5		General sq. work	4 yrs.
9	22/8 (4)	13/2 (10)	45¼ ,,	Do. do.	18/3 — 22/-			General sq. work, round work, fancy baskets and chairs	4 yrs.
10	22/- (31)	20/- (24)	45 ,,	Lancs & Cheshire Skip & Basket Makers' Assoc.	20/- — 22/-	—	8	Potato hampers, skips, general sq. work	3 yrs.
11	25/10½ (3)	18/11 (17)	48 ,,	Yorks Employers' Cane & Willow Workers' Assoc.	20/-	5	4	Skips, basket carriers, office trays	3 yrs.
12	21/5 (5)	22/3 (9)	48 ,,	Do. do.	12/4 — 20/-	2	7	Hampers, chairs, small fancy work	3 yrs.

The numbers in brackets in Columns 2 and 3 are the numbers of workers from whose wages the average wage is calculated

*Average Wages = Average amount made by man when fully employed throughout the working week.

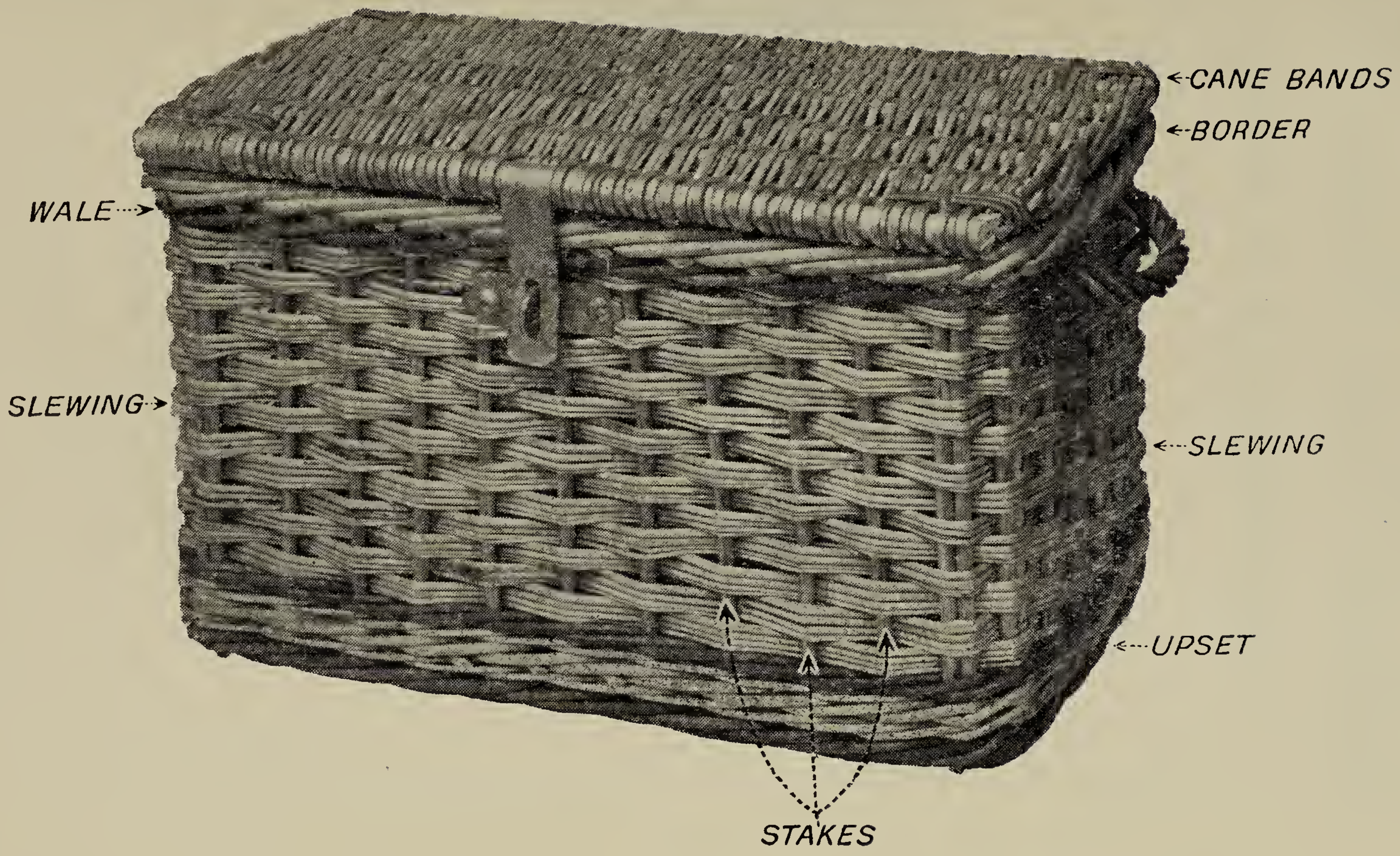
RANDED HAMPER

Illustrating processes described



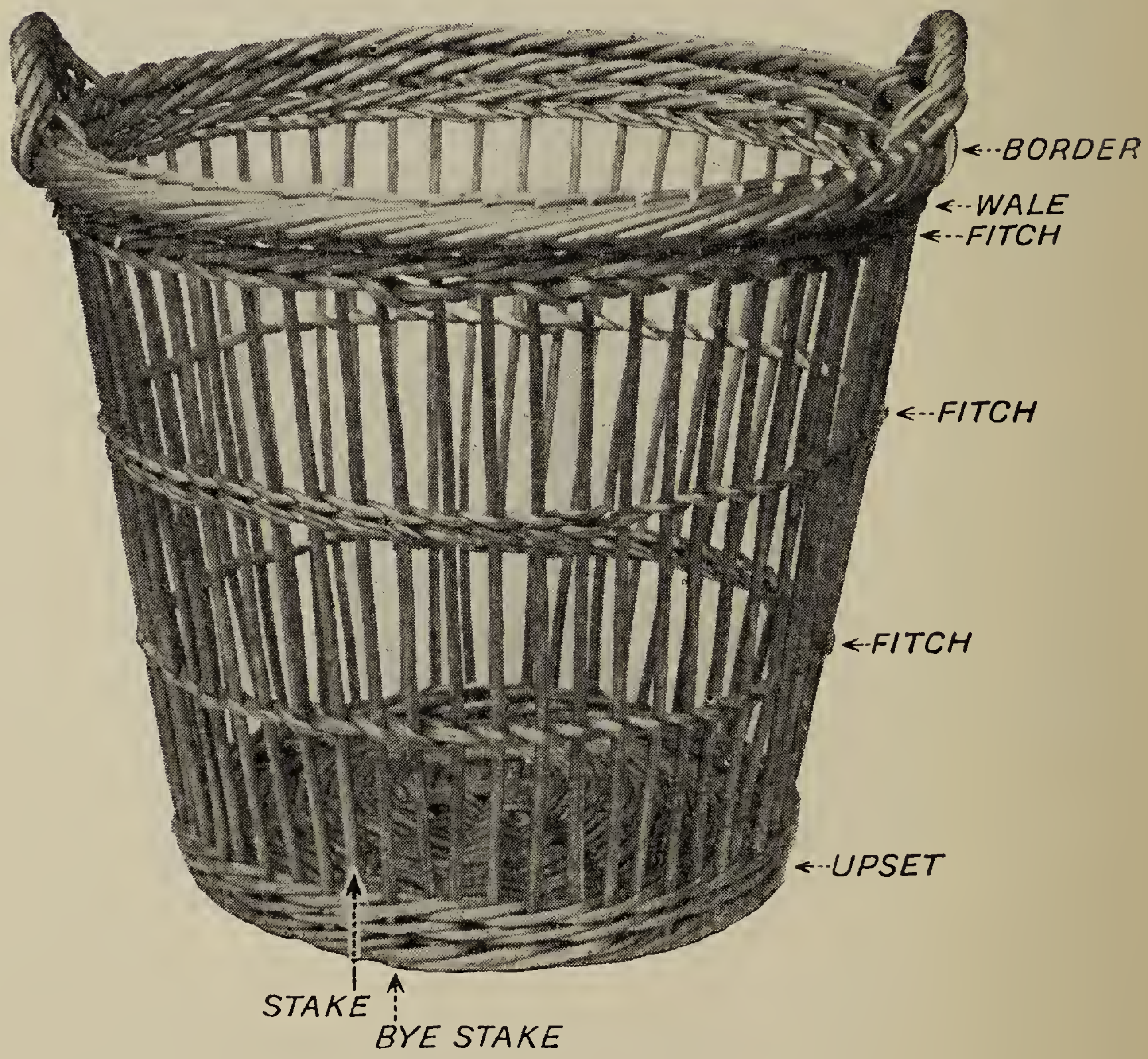
SLEWED HAMPER

Illustrating processes described



Fitched Waste Paper Basket

Illustrating processes described



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